



Elizabeth Phillips

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Elizabeth Phillips is a DPhil student in the newly established Centre for Doctoral Training in Cyber Security at Oxford University. She has worked with Sadie Creese and her Cyber Security Group on and off since 2011 working on Identity Security in CyberSpace and Social Network Analysis. Having undertaken an internship with the UK Civil Service, she began working with the Capacity Building Centre for Cyber Security at the Oxford Martin School where she worked on producing the initial documents for the Cyber Education and Technology & Standard Dimensions. Her most recent work has been on extracting hierarchical influence from Email Communication and helping develop the case for a Cyber Skills Framework for South Africa. She has also worked with the BCS on a white paper outlining the case for a new Cyber Security Skills Framework for professionals and has worked with the UK exam boards to design and implement a new suite of qualifications in Digital Security. She has also worked alongside policy makers and ministers to help design Canada and the UK's latest Cyber Security policies as one of two students participating in the Canada-UK Colloquium in 2014.

In the first of 2 projects with the CDT, she set out to explore the many ways in which Social Network Analysis (SNA) can be applied to the field of security, and especially, investigating what interactions could someone (e.g. an attacker) infer if they were able to gather data on a person's friend groups or technology devices (e.g. email interactions) and whether this could be used to predict the "hierarchical importance" of the individual. Her second project set out to argue the case for a Cyber Security curriculum for South Africa and identified distinct users of cyberspace in South Africa and the skills training they require in order to safely navigate across cyberspace.

Following on from the research undertaken as part of her first mini project, her PhD will investigate to what extent we can apply social network analysis techniques to various types of communication data in order to identify influential players within a network. This in turn will allow us to identify any potential insiders within an organisation by highlighting those individuals that have greater influence than their role entails and the results can be combined with other indicators obtain from other means, including both technical and psychological metrics. The end result will be an expansion of the tool support created as part of the mini project, which will allow users to navigate their way through a communication network and highlight individuals of interest.

In June 2014, Elizabeth was elected as the new president for Oxford University's Women in Computer Science Society. She was the organiser of the first Women in Computer Science conference in Cambridge in February 2014 and was part of the organising committee for the 2015 conference. She also helps arrange coffee meetings and provides direction for the society. She also participates in Women in Computer Science events for potential students as well as additional mentoring events as a Computer Science ambassador and a university Widening Participation mentor. In addition to her academic commitments, she is also a member of the department's Social Committee and their Equality and Diversity Committee. As the only student representative on both committees, her role is to voice student opinions to the rest of the department and encourage greater equality across the department. These tasks include helping write the department's successful Athena Swan Application in November 2014. Her achievements led to her being awarded a variety of scholarships and awards including a Google "Women in Tech" award, a WiCyS 2015 scholarship, and various outreach awards.